



Schistosomiasis (SHIS-toe-SO-my-uh-sis)

What is schistosomiasis?

Schistosomiasis, also known as bilharzia (bill-HAR-zi-a), is a disease caused by parasitic worms. Infection with *Schistosoma mansoni*, *S. haematobium*, and *S. japonicum* causes illness in humans. Although schistosomiasis is not found in the United States, 200 million people are infected worldwide.

How can I get schistosomiasis?

Infection occurs when your skin comes in contact with contaminated fresh water in which certain types of snails that carry schistosomes are living.

Fresh water becomes contaminated by *Schistosoma* eggs when infected people urinate or defecate in the water. The eggs hatch, and if certain types of snails are present in the water, the parasites grow and develop inside the snails. The parasite leaves the snail and enters the water where it can survive for about 48 hours. *Schistosoma* parasites can penetrate the skin of persons who are wading, swimming, bathing, or washing in contaminated water. Within several weeks, worms grow inside the blood vessels of the body and produce eggs. Some of these eggs travel to the bladder or intestines and are passed into the urine or stool.

What are the symptoms of schistosomiasis?

Within days after becoming infected, you may develop a rash or itchy skin. Fever, chills, cough, and muscle aches can begin within 1-2 months of infection. Most people have no symptoms at this early phase of infection.

Eggs travel to the liver or pass into the intestine or bladder. Rarely, eggs are found in the brain or spinal cord and can cause seizures, paralysis, or spinal cord inflammation. For people who are repeatedly infected for many years, the parasite can damage the liver, intestines, lungs, and bladder.

Symptoms of schistosomiasis are caused by the body's reaction to the eggs produced by worms, not by the worms themselves.

What should I do if I think I have schistosomiasis?

See your health care provider. If you have traveled to countries where schistosomiasis is found and had contact with fresh water, describe in detail where and for how long you traveled. Explain that you may have been exposed to contaminated water.

How is schistosomiasis diagnosed?

Your health care provider may ask you to provide stool or urine samples to see if you have the parasite. A blood test has been developed and is available at CDC. For accurate results, you must wait 6-8 weeks after your last exposure to contaminated water before the blood sample is taken.

What is the treatment for schistosomiasis?

Safe and effective drugs are available for the treatment of schistosomiasis. You will be given pills to take for 1-2 days.

Am I at risk?

If you live in or travel to areas where schistosomiasis occurs and your skin comes in contact with fresh water from canals, rivers, streams, or lakes, you are at risk of getting schistosomiasis.

In what areas of the world does schistosomiasis occur?

- Africa: southern Africa, sub-Saharan Africa, Lake Malawi, the Nile River valley in Egypt
- South America: including Brazil, Suriname, Venezuela
- Caribbean: Antigua, Dominican Republic, Guadeloupe, Martinique, Montserrat, Saint Lucia (risk is low)
- The Middle East: Iran, Iraq, Saudi Arabia, Syrian Arab Republic, Yemen
- Southern China
- Southeast Asia: Philippines, Laos, Cambodia, Japan, central Indonesia, Mekong delta.

How can I prevent schistosomiasis?

- Avoid swimming or wading in fresh water when you are in countries in which schistosomiasis occurs. Swimming in the ocean and in chlorinated swimming pools is generally thought to be safe.
- Drink safe water. Because there is no way to make sure that water coming directly from canals, lakes, rivers, streams or springs is safe, you should either boil water for 1 minute or filter water before drinking it. Boiling water for at least 1 minute will kill any harmful parasites, bacteria, or viruses present. Iodine treatment alone WILL NOT GUARANTEE that water is safe and free of all parasites.
- Bath water should be heated for 5 minutes at 150° F. Water held in a storage tank for at least 48 hours should be safe for showering.
- Vigorous towel drying after an accidental, very brief water exposure may help to prevent the *Schistosoma* parasite from penetrating the skin. You should NOT rely on vigorous towel drying to prevent schistosomiasis.

For more information:

1. Centers for Disease Control and Prevention. Schistosomiasis in Peace Corps volunteers - Malawi, MMWR 1993;42:565-70.
2. Cetron MS, Chitsulo L, Sullivan JJ, et al. Schistosomiasis in Lake Malawi. Lancet 1996;348:1274-8.
3. Jordan P. Schistosomiasis. The St. Lucia Project. New York: Cambridge University Press, 1985.
4. Jordan P, Webbe G, Sturrock RF, eds. Human schistosomiasis. Wallingford: CAB International, 1993.
5. Rollinson D, Simpson AJG, eds. The biology of schistosomes from genes to latrines. London: Academic Press, 1987.
6. Tsang VCW, Wilkins PP. Immunodiagnosis of schistosomiasis. Screen with FAST-ELISA and confirm with immunoblot. Clin Lab Med 1991;11:1029-39.
7. World Health Organization. The control of schistosomiasis: Second report of the WHO Expert Committee. WHO Technical Report Series 830. Geneva: WHO, 1993.

This fact sheet is for information only and is not meant to be used for self-diagnosis or as a substitute for consultation with a health care provider. If you have any questions about the disease described above or think that you may have a parasitic infection, consult a health care provider.



DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION
SAFER • HEALTHIER • PEOPLE™

